

**REMARKS**

Applicants thank the Examiner for careful consideration of the application.

Applicants have amended claims 1, 22, 30 and 33.

Applicants cancels claim 20.

No claims have been allowed by the Examiner.

**I. Rejections under 35 U.S.C. §112:**

Examiner has rejected claims 1-36 under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 1, Examiner asserts that it is not understood what "a substrate carrier having a substrate receiving surface" is. Applicants assert that both the substrate carrier and the substrate receiving surface are fully supported throughout the detailed description of the instant specification (see pages 4-14). In particular, see, for example, paragraph 10 and Fig. 1 describing substrate 132 substrate carrier portion 126 which includes substrate receiving surface 138. Also, see, for example, paragraph 25 and Fig. 2 describing substrate carrier 222 which includes substrate receiving surface 238 and also describes substrate 232.

In addition, Examiner asserts that it is not understood what things are bonded by adhesive. Applicants assert that what things are bonded by the adhesive claimed in the instant specification are also fully supported throughout the detailed description (again see pages 4-14). In particular, see for example, paragraph 10 and Fig. 1 describing adhesive bead 142 disposed between substrate 132 and substrate receiving surface 138 of substrate carrier portion 126. Also, see, for example paragraph 25 and Fig. 2 describing adhesive bead

242 disposed between substrate 232 and substrate receiving surface 238 of substrate carrier 222.

In regards to claim 9, Examiner asserts that it is not understood what a "fluid definition layer" is. Applicants assert that the fluid definition layer is fully supported throughout the detailed description of the instant specification (see pages 4-14). In particular, see, for example, paragraph 16 and Fig. 1 describing fluid definition layer 152.

Examiner has also stated that it is not understood what the "means for ejecting a fluid" is. Applicants assert that the means for ejecting a fluid is fully supported throughout the detailed description of the instant specification (see pages 4-14). In particular, see, for example, paragraph 16 and Fig. 1 describing where fluid ejector actuator 150 may be any device capable of imparting sufficient energy to the fluid to cause ejection of fluid from chamber 156. Also, see, for example, paragraph 28 describing a few examples where energy generating element 251 may be a thermal resistor, a piezoelectric, a flex-tensional, an acoustic, or an electrostatic element.

Examiner has also stated that it is not understood what the "means for forming a chamber" is. Applicants assert that the means for forming a chamber is fully supported throughout the detailed description of the instant specification (see pages 4-14). In particular, see, for example, paragraph 16 and Fig. 1 describing fluid definition layer 152. Also, see, for example, paragraph 28 and Fig. 2 describing chamber layer 252.

Examiner has also stated that it is not understood what the "means for forming a nozzle" is. Applicants assert that the means for forming a nozzle is fully supported throughout the detailed description of the instant specification (see pages 4-14). In particular, see, for example, paragraph 16 and Fig. 1 describing orifice layer 154 and bore 158. Also, see, for example, paragraph 28 and Fig. 2 describing nozzle layer 254 and nozzles 258.

Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of claims 1-36 under 35 U.S.C. §112 as being indefinite.

## II. Rejections under 35 U.S.C. §102(e):

Examiner has rejected claims 1-3, 8-11, 14, and 33-35 under 35 U.S.C. §102(b) as being anticipated by Ota et al. (JP 06183000A, abstract only "Ota"). This rejection is respectfully traversed with regard to claims 1-3, 8-11, 14, and 33-35 because all of the elements of the claimed invention are not present in the cited reference.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *MPEP 2131*. The identical invention must be shown in as complete detail as is contained in the . . . claim. *MPEP 2131* citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226 (Fed. Cir. 1990).

Amended independent claim 1 discloses a fluid ejection cartridge having "a substrate carrier having a substrate receiving surface; a substrate . . . and a two-part adhesive disposed between said substrate and said substrate receiving surface, wherein said two-part adhesive comprises an epoxy resin . . . and a hardener having 3-aminomethyl-3,5,5-trimethyl-1-cyclohexylamine." In contrast, the Ota abstract discloses an inkjet head having nozzle plate 2 (see Fig.1 of Ota) connected so as to create a lid on ink cavity 8 formed by channel plate 1 and cover plate 6." *See for example Abstract and Fig. 1.* In addition, the Ota abstract discloses angle filling member 7 or filler 7 is formed to create a streamlined shape of the cavity 8 so as to eliminate the angular part wherein the filler is an epoxy resin and uses cyclic aliphatic polyamine. *Id.* Thus, the Ota abstract discloses an inkjet head using an epoxy resin containing a cyclic aliphatic polyamine to form an angle filling member between a nozzle plate and a channel

plate as well as a cover plate, and does not disclose a fluid ejection cartridge having "a substrate carrier having a substrate receiving surface; a substrate . . . and a two-part adhesive disposed between said substrate and said substrate receiving surface, wherein said two-part adhesive comprises an epoxy resin . . . and a hardener having 3-aminomethyl-3,5,5-trimethyl-1-cyclohexylamine," as disclosed and claimed in the instant case.

Thus, because the Ota abstract does not disclose, a fluid ejection cartridge having "a substrate carrier having a substrate receiving surface; a substrate . . . and a two-part adhesive disposed between said substrate and said substrate receiving surface, wherein said two-part adhesive comprises an epoxy resin . . . and a hardener having 3-aminomethyl-3,5,5-trimethyl-1-cyclohexylamine," as recited in amended independent claim 1; the Ota abstract does not anticipate or render obvious amended independent claim 1, since a two-part adhesive disposed between said substrate and said substrate receiving surface, wherein said two-part adhesive comprises an epoxy resin . . . and a hardener having 3-aminomethyl-3,5,5-trimethyl-1-cyclohexylamine, are elements of the claimed invention arranged in a manner distinct from that disclosed in the Ota abstract.

Since a proper anticipation rejection requires that there be present in a single prior art reference a disclosure of all of the elements of the claimed invention arranged as in the claims, Applicant believes that the Ota abstract does not anticipate the present invention. See MPEP 2131. Therefore, Applicant respectfully requests that the Examiner withdraw the rejection of claims 1-3, 8-11, 14, and 33-35, based on the Ota abstract under 35 U.S.C. § 102(b).

### **III. Rejections under 103:**

Examiner has rejected claims 4-7 under 35 U.S.C. §103(a) as being unpatentable over Ota et al. (JP 06183000A, abstract only, "Ota") in view of Examiner's remarks. This rejection is respectfully traversed with regard to claims

4-7 since neither the cited reference nor Examiner's remarks, taken either individually, or in combination therewith, teaches, suggests, or mentions the claimed invention.

In regards to the dependent claims, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. MPEP 2143.03. Dependent claims 4-7 are dependent upon amended independent claim 1, and are therefore believed to be allowable as dependent upon a believed allowable claim. Accordingly, Applicants assert that the rejection has been overcome. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of dependent claims 4-7, under 35 U.S.C. § 103(a).

To establish a *prima facie* case of obviousness, three basic criteria must be met. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, i.e. the prior art must suggest the desirability of the claimed invention. There must be a reasonable expectation of success. Finally all claim limitations must be taught or suggested by the prior art. MPEP §2143. These requirements are not met here.

In addition, as Examiner states the Ota abstract fails to teach the drop volume or the fluid energy generators recited in dependent claims 4-7. Thus, the Ota abstract does not disclose, teach or suggest, "wherein activation of said fluid energy generating element ejects essentially a drop of a fluid from said at least one nozzle, and the volume of the fluid, of essentially said drop, is in the range of from about 5 femto-liters to about a 900 pico-liters," as it is disclosed, defined, and claimed, in dependent claim 4 by the Applicants in the instant specification. In addition, a statement that modifications of the prior art of record to meet the claimed invention are "deemed a matter of engineering choice" is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. See *MPEP* 2143.01. The rationale to modify or combine the prior art does not have to be expressly stated in the prior

art; the rationale may be reasoned from knowledge generally available to one of ordinary skill in the art. See *MPEP* 2144. However, Examiner must present convincing line of reasoning supporting rejection. *Ex parte Clapp*, 227 USPQ 972 (Bd. Pat. App. & Inter. 1985). Applicants respectfully disagree with Examiner that the limitations set forth in dependent claims 4-7 are a matter of engineering choice. Accordingly, the Applicants assert that the rejection has been overcome. Therefore, the Applicants respectfully request that the Examiner withdraw the rejection of dependent claims 4-7.

If Examiner does not withdraw the rejection, Examiner is respectfully requested to either cite a particular reference or provide an affidavit, that it would have been obvious at the time the invention was made, to a person having ordinary skill in the art, to modify the invention of the Ota abstract so that it would have the claimed limitations set forth in dependent claims 4-7. Examiner is requested to provide specific factual findings predicated on sound technical and scientific reasoning to support Examiner's conclusion of common knowledge and mere engineering choice. See *MPEP* 2144.03.

Examiner has rejected dependent claims 18-32, under 35 U.S.C. § 103(a) as being unpatentable over Ota et al. (JP 06183000A, abstract only, "Ota"). ) in view of Braun et al. (DD 142964A, abstract only, "Braun"). This rejection is respectfully traversed with regard to claims, 19, 23-24, 26, and 28-32 since neither of the cited references, taken either individually or in combination therewith, teach, suggest, or mention the claimed invention.

In regards to the dependent claims, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. MPEP 2143.03. Dependent claims 18-32 are dependent upon amended independent claim 1, and are therefore believed to be allowable as dependent upon a believed allowable claim. Accordingly, Applicants assert that the rejection has been overcome. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of dependent claims 18-32, under 35 U.S.C. § 103(a).

In regards to dependent claim 19, dependent claim 19 is dependent upon amended independent claim 1, and is therefore believed to be allowable as dependent upon a believed allowable. In addition, the Ota abstract does not disclose, teach, or suggest "a glycidyl ether of bisphenol F," as it is disclosed, defined, and claimed, in dependent claim 19 by Applicants in the instant specification. The Ota abstract discloses, as previously discussed above, an inkjet head using an epoxy resin containing a cyclic aliphatic polyamine to form an angle filling member between a nozzle plate and a channel plate as well as a cover plate.

Further, the Braun abstract does not disclose, teach, or suggest, "a glycidyl ether of bisphenol F," as it is disclosed, defined, and claimed, in dependent claim 19 by Applicants in the instant specification. The Braun abstract discloses "a bisphenol A resin." Thus, the combination of the Ota and Braun abstracts are silent on "a glycidyl ether of bisphenol F." Thus, the Examiner's suggested combination (which may or may not be proper) of Ota and Braun does not teach the present invention as recited in dependent claim 19 and thus does not meet any of the three basic criteria that must be met to establish a *prima facie* case of obviousness under MPEP §2143. Accordingly, Applicants assert that the rejection has been overcome. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of dependent claim 19 based on the Ota abstract in view of the Braun abstract under 35 U.S.C. § 103(a).

Likewise for dependent claims 23-24, 26, and 28-32, the Examiner states the Ota abstract is silent on the claimed limitations in these dependent claims. The Braun abstract is also silent on these claimed limitations. In regards to claims 23 and 24 the Braun abstract is silent on a thixotrope (claim 23) and various specific thixotropes such as nanoclays and talcs. In regards to claim 26 the Braun abstract is silent on using a silane coupling agent in the range from about 0.2 weight percent to about 2.0 weight percent. In regards to claims 28 and 29, the Braun abstract is silent on a filler added to adjust a mix volume ratio

of said epoxy resin and said hardener in the ranges from about 4 to about 1 (claim 28 and from about 1:1 to about 10:1 (claim 29). In regards to claim 30 the Braun abstract is silent on specific fillers such as glass spheres and mica powder. In regards to claims 31 and 32 the Braun abstract is silent on the addition of a pigment to the two-part adhesive to provide visual reference of proper mixing.

Thus, the Examiner's suggested combination (which may or may not be proper) of the Ota abstract and the Braun abstract does not teach the present invention as recited in dependent claims 23-24, 26, and 28-32, and thus, does not meet any of the three basic criteria that must be met to establish a *prima facie* case of obviousness under MPEP §2143. Accordingly, Applicants assert that the rejection has been overcome. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of dependent claims 23-24, 26, and 28-32 based on the Ota abstract in view of the Braun abstract under 35 U.S.C. § 103(a).

Therefore, in view of the foregoing Amendment and Remarks, Applicants believe the present Application to be in a condition suitable for allowance. Examiner is respectfully urged to withdraw the rejections, reconsider the present Application in light of the foregoing Amendment, and pass the amended Application to allowance.

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PATENT APPLICATION  
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If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is respectfully requested to call Applicants' representative at (541) 715-1694 to discuss the steps necessary for placing the Application in condition for allowance.

Favorable action by the Examiner is solicited.

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Respectfully submitted,  
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